

### ABSTRACT OF THE DISCLOSURE

A system and method for providing communications within an airfield between an aircraft component located upon an aircraft and an airport data network. A control computer is used to select an optimal antenna substation from a plurality of antenna substations disposed about the airfield for the aircraft component to communicate with. The selection is based in part upon position information including the directional heading of the aircraft, determined using a suitable position detecting system, such as a Global Positioning System or a multi-lateration system, and in part upon the loading (i.e., RF traffic) being experienced by each antenna array. Determining the optimal antenna array for the aircraft to communicate with based on the directional heading of the aircraft and the real time usage of each of the antenna substations is advantageous as it decreases the number of times that the aircraft must initiate a new connection with a new antenna substation, and therefore decreases the transmission interruptions experienced due to the creation of new connections.